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EXTRACTS FROM AN INAUGURAL THESIS ON YELLOW FEVER.

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YELLOW fever is peculiar, in that it is confined to certain circumscribed geographical limits, namely: Upon land bordering upon the Atlantic Ocean, or rivers and estuaries emptying into it. While the tropical or semi-tropical regions of this division of the globe is its usual habitat, yet it has been carried and propagated as far north as Philadelphia, New York and Boston, 40°–41° N., St. Nazaire, France, 47° N., and Plymouth and Southampton, England, 50°–51° N.; as far South as Montevideo, 35° S., and is quite frequent in Rio Janeiro.

It seems, however, to occur endemically only in the West Indies, shores of the Caribbean Sea, and the eastern coast of Central America and Mexico. When it appears beyond these limits, it is not generated *de novo*, but its germs have been transported thither from those regions where it is endemic.

While within these limits, it is usually confined to cities, towns, and camps located upon the low alluvial shores of the sea, or rivers emptying into it, it sometimes penetrates far inland, as in Memphis and Shreveport, in 1873, where it manifested all its malignancy and fatality. Again, it mounts high above the sea on rocky heights, to which malaria rarely or never ascends, as at Gibraltar, 1,400 feet above the sea; Stony Point and Newcastle, Jamaica, 2,500 and 4,000 feet above the sea. It is unknown upon the western coast of North and South America, Australia, East Indies; or, in fact, any part of Asia, eastern coast of Africa, and only the Atlantic ports of Europe, especially those of Portugal and Spain.

As to its origin or cause, I believe

it to depend upon the presence of animalcular germs; that these germs depend for their sustenance and propagation upon accumulations of animal matter—probably, a certain degree of heat and moisture; and, entering the human system, are capable there of propagating and multiplying, and of producing the morbid effects known as yellow fever.

A peculiarity in this disease is, that it produces its greatest effects in those of a phlegmatic temperament. By this, I mean those of a full habit, whose powers of assimilation are greater than those of elimination, and consequent accumulation of a superabundance of adipose tissue. When it attacks one of this class, his chances of recovery are small compared to those of a bilious temperament, whose powers of elimination are as great or greater than those of assimilation. Probably, upon this fact, we can account for the greater fatality also, of the disease among those who habitually indulge in alcoholic liquors, as we know the tendency of alcohol, in any of its forms, is to interfere with the process of metamorphosis and elimination, and increasing that of assimilation, as is noticeable in our habitual beer-drinkers. At any rate, whether the superabundant adipose tissue plays any important part in the sustenance and multiplication of these germs, is not for me to say, but the fact remains, that this class of individuals are especially obnoxious to the disease.

In regard to the geographical limitation of this species of animal life, we know that certain orders and species have their habitat in certain divisions of the world, and the *fiat* which has set the bounds of many known forms of animal life, beyond which they cannot live and thrive naturally, may certainly, also, have circumscribed the domain of this unknown animalcule.

That yellow fever is not referable in every instance to local malarial causes, or more nearly allied to the malarial than the continued fevers, is shown by the fact that it is not dependent upon the malaria engendered by vegetable decomposition, for its existence and propagation; that the two hardly ever co-exist; that while yellow fever seeks cities, towns, and camps where people are aggregated together, and the consequent accumulation of animal matter, malarial fevers seek the open country, where rank vegetation thrives, and stagnant waters abound; and amidst the greatest exhalations of miasm, yellow fever rarely appears. That, while yellow fever manifests itself only within a limited zone, malarial fevers are co-extensive with the world—in the jungles of the East Indies, wilds of Africa, the Pontine marshes, and the swamps of our own country, where it often takes on as fatal effects as the more dreaded yellow fever.

Again, malarial fever, even in its most severe forms, does not tend to produce that condition of the system which secures an immunity from subsequent attacks. On the other hand, yellow fever rarely or never attacks the same person the second time. In these two respects, then—dependence upon the accumulation of animal matter for its existence and propagation, and the faculty of exhausting the susceptibility of the individual in a single manifestation—it certainly appears more nearly allied to the *con-*

tinued than the malarial, or periodical fevers.

That it is also *contagious*, I will endeavor to show, after I have related what I personally know about it in that respect.

I come now to examine the discrepancies on these points by medical writers and teachers; some maintaining its non-contagious remittent type, others its contagious continued character; some affirming that long-continued high temperature, 82° F. for two or more months, is a necessary element; others doubting it, and so on.

Both are right—that is, they have all observed these conditions in connection with a disease they have all designated as yellow fever.

Until the researches of Louis and Jenner established the contrary, typhus and typhoid fever were supposed to be one, and the same pathological condition of the system, or modification of the same; so, with what has heretofore been known as yellow fever, and recognized under different forms of manifestation, symptoms, progress, pathological lesions and conditions, is now coming to be recognized and separated into two distinct diseases, arising from different causes, with some symptoms and pathology in common, and others of a distinctive character, namely: *specific yellow fever*, and *yellow* remittent, or hæmorrhagic malarial fever.

In both, we may have yellowness of skin, intense headache, delirium, and black vomit, but here the analogy ceases. In yellow remittent fever, the pulse is uniformly rapid, 110–130 during the pyrexia; the delirium is more common and greater; the characteristic pain in the lumbar region is slight or wanting; the urine is not albuminous; there is no tendency towards suppression; and this form of fever is observed occasionally, in all parts of the world where malaria abounds in its most concentrated form.

While ordinary ague results from a mild, diffusible form of malaria, remittent fever and congestive fever are caused by a more concentrated form of the same *materies morbi;* and yellow remittent fever, requires in addition to this for its generation, long-continued high temperature, and probably, a peculiar state of the surrounding atmosphere.

On the other hand, in specific yellow fever, after the premonitory symptoms, the pulse is remarkably slow; sometimes of a "hobbling" character; the pain in the lumbar region is excruciating, resembling that of a severe sprain or contusion; the delirium is slight, if any, in most cases (indeed, I have known of fatal cases in which the patient was perfectly conscious until the last moment); the urine is albuminous; there is always marked diminution, and a tendency toward suppression; suppression being a *fatal pathognomonic symptom*, much more so than that of black vomit.

In yellow remittent fever, after the febrile symptoms have obtained from twelve to seventy-two hours, a remission occurs, which, unless convalescence is established, as is sometimes the case, continues for several hours, when all the symptoms return in an aggravated form, during which black vomit is apt to supervene, and, if death does not follow, convalescence is slowly established, or it may assume a typhous form with slow lingering recovery, or death from exhaustion.

On the other hand, specific yellow fever runs its course in from three to eight days, and either kills the patient or ends in almost complete recovery, in an incredibly short space of time. Sometimes, within a few hours after the febrile symptoms have passed away, the patient with undiminished muscular strength, and a voracious appetite, insists upon leaving his bed and going about his business. This, however, should never be permitted, as the overwhelming influences to which the system has been subjected, leaves it in such condition, although not recognized by the patient, that any indiscretion in regard to diet and muscular effort during a few days after convalescence is established, will almost surely result in a relapse and death. Therefore, he should be kept quiet for a few days, and gradually accustom himself to ordinary diet.

During the fall and winter of 1868-9, I was in Montgomery, Alabama, and an epidemic of fever, of a severe and fatal character, occurred there, with yellowness of skin and black vomit, and death in a large percentage of cases. But the fact of its occurrence late in the season, after frost had fallen several times, together with the fact that it could not be traced to other than local causes, led the profession to pronounce it yellow remittent, or hæmorrhagic malarial fever.

I may be permitted to say here, what I ought to have said before, that in specific yellow fever, the occurrence of white frost invariably puts an end to it, at least in its epidemic form; and no one who has not witnessed it, can imagine the joy which lights up the countenances of a people afflicted with this scourge, when, on rising some cold, clear morning, they see a white mantle spread abroad on the housetops and earth. Instantly, the event long and anxiously looked, hoped, and prayed for, is dispatched to those who have fled at its approach, and they return with feelings of safety to their abandoned homes. Cold is destructive to the germs of yellow fever, and only those will suffer thereafter during that season, who have already been contaminated, or who may enter dwellings where the germs may have been developed, and may not have been subjected to such a degree of cold as to destroy them.

I come now to relate my personal experience with yellow fever, and I believe I am right when I say that the experience and observation of interested individuals, are worth more to the science of medicine than all the fine-spun theories ever elaborated from the brain of the enthusiast.

In 1867, I was stationed at Fort Gaines, on Dauphin Island, 33 miles south of Mobile. The island is from one-fourth to one mile wide, and about fifteen miles long. It is low, flat, and covered with rank vegetation and swamps. In the summer and fall months, the exhalations from these marshes, especially about sunset, is so great as to be almost unbearable; so much so, that many times we were obliged to close our doors and windows. The consequences were, that we suffered severely from malarial fevers, some of them of the most obstinate character. From ten per cent. to forty per cent. of the garrison, were constantly under its influence.

On the opposite side of the bay, about three miles south-east, was Fort Morgan, situated on Mobile Point, a long sandy ridge projecting out across the bay from the east. Ma-

larial influences here were slight, and the garrison at Fort Morgan suffered but little from periodical fevers. The garrison at Fort Morgan consisted of one company, and at Fort Gaines, of two companies, of the 15th U. S. Infantry.

On the 13th of August, an officer of the U. S. Engineer Corps returned to Fort Morgan from New Orleans, where yellow fever was then prevalent, and in a few days was taken sick and died with black vomit. On the 27th, the commanding officer and commissary sergeant, who had attended the engineer officer, were taken, and on the 30th, died. Two other officers were sent down from Mobile, together with the best medical skill, yet within a week, fifteen of the forty odd men, and three of the officers were either dead or had it, every one of whom died except the hospital steward; he was saved by heroic doses of quinia, thirty grains every three or four hours. At this juncture, the remnant of the garrison evacuated the fort, and moved out to "Navy Cove," three or four miles from the fort. No new cases were developed after the removal of the command.

At our fort we had established a strict military quarantine, disinfected all outhouses by means of carbolic acid, whitewashed the buildings, etc., and the result was, that while we suffered so much more severely from malaria than Fort Morgan, yet but one case occurred at Fort Gaines, and that as follows: About the 10th of November, the disease was declared to have disappeared from Mobile, and during the last week in November, a general court martial was ordered to sit in Mobile. Among others (from Fort Gaines), the Post Surgeon and a Sergeant of one of the companies were summoned as witnesses. While this sergeant was in Mobile, he stopped several nights in a house where yellow fever had occurred. On the last day of the month, November, he returned to his post. Next morning, his name appeared on the company's sick list, but as he did not appear personally, he was not excused from duty. Just before sunset of the same day, I was sent for in great haste, and found him in bed, with some delirium, suffused eyes and countenance, severe pain in head and lumbar region, and vomiting a whitish flocculent substance quite freely. He was immediately sent to the hospital, placed in a hot mustard bath, and given an active cathartic. He soon became erratic, wanting any and everything, which was no sooner procured than it would be refused. He would get up by the fire, then lie on a bed for a moment, which not suiting him, would be changed for another. In my perplexity and ignorance, I began giving him quinia in gr. v. doses, but about midnight he began to have black vomit. Convulsions set in, and he sank into a comatose condition, and about 4 A.M., he died. Daylight revealed the fact that his face and neck were as yellow as brass. I *then* knew I had been dealing with a case of yellow fever. He was buried as soon as possible, and under instructions of the commanding officer, I burned everything in the ward with which he had come in contact, saturated the ward with a hot solution of carbolic acid and chloride of lime, and burned camphor on the stove. All this may seem laughable, but should be excused on account of my ignorance as to what should be done,

as I had only just begun the study of medicine, and knew only the routine treatment of the more ordinary diseases. The disease did not communicate itself to any other person, which was doubtless owing more to the extremely cold weather prevalent at that time, than to my destructive and disinfecting measure.

My next experience was in fighting yellow fever at a distance; in other words, keeping it from our doors when it approached so near, that with the least cessation of vigilance, it might have obtained a foothold, and decimated our garrison as it had done before, and since. This was at Fort Jefferson, Dry Tortugas. This place is particularly obnoxious to yellow fever, and it has occurred there a number of times. In 1867, it was brought there from Havana, eighty miles south, and carried off forty-two men and several officers before it was arrested. The Post Surgeon, his son, and the Post Commander, had died; a large part of the garrison were down with it when Dr. Mudd, sent there for his complicity in the assassination of President Lincoln, was called upon to do what he could, until other medical assistance could be obtained from Key West, seventy-five miles distant. One of the first acts of Dr. Mudd was, to order one hundred of the ten-inch columbiads—the full charge of powder for which is forty pounds—to be loaded, and about midnight, they were all fired off in rapid succession, filling the fort with its terrible concussion, and dense sulphurous smoke. As soon as other medical assistance arrived, all of the command able to do so, were moved to Loggerhead Key, three miles west, and the disease rapidly subsided.

Dr. Mudd deserved, and received a great deal of credit for his efforts under the circumstances, and it was an interesting question whether his action in firing off the cannon, had any effect in staying the progress of the disease. Some maintained that it did.

The *germs* of this epidemic, whereby two-thirds of a garrison of four companies had been attacked, with nearly fifty deaths, were proven before a military commission to have been brought in, or on, the person of an officer, who had visited Havana on the 4th of July, and about eight days after his return, was taken with it, but recovered. From this case, it spread with great rapidity, as many as forty cases having occurred during a single night. Here, malarial fevers are rare. I cannot recall a dozen marked cases during the two years and three months I was there, i. e., from January, 1869, to April, 1871.

On the 22d of May, 1870, yellow fever was declared epidemic in Key West, and as all our communication with the outer world was through that place, upon the recommendation of the Post Surgeon, a rigid quarantine was established; and from the 22d of May until the 10th of November, a period of nearly six months, no vessels were allowed to approach within a mile of the fort, under the penalty of being fired into, and no persons were permitted to come to, or go from, the fort.

All our mails, provisions, etc., were put off by the crew of the vessel on "Bird Key," nearly a mile to the leeward of the fort (the north-east trade winds prevail there); and after the vessel had left the mail matter, was fumigated or disinfected over burning

sulphur in a close apparatus devised for the purpose, and then brought, in many instances brown and discolored, to the fort for distribution. Should any provisions or clothing have been landed, a squad of prisoners were sent down with a mixture of whitewash and sulphate of iron, with which every box, barrel, and package was thoroughly coated, and allowed to remain in the hot sun for twenty-four hours, before being brought to the fort for issue.

Within, the fort was whitewashed throughout; the utmost cleanliness was enforced; tar was burned in the various bastions; privy vaults and sewers were washed out, disinfected, and nearly all locked up, outhouses being built outside on the wharves over deep water.

While, therefore, the epidemic at Key West carried off over one-third of the garrison and a large part of the population; appeared on board, and carried off two of the crew of the Government schooner plying between Key West and Fort Jefferson; and also attacked fatally, one of the light-keepers at Loggerhead Lighthouse, three miles west of us, who was so incautious as to go to Key West, although stopping there but a few hours; yet, surrounded as we were by the pestilence, and, as before said, in a place especially obnoxious to it, under the efficient means adopted, and which caused a great deal of discomfort and privation, we entirely escaped it.

Let us reverse the picture for a moment. During the summer of 1873, other medical officers were stationed there. *They* did not believe in the contagion of yellow fever. Oh, no! It depends upon local causes, and will appear independently of importation, and we will have none of your quarantine and police regulations, with all their attending discomforts and privations!

What was the result? Yellow fever was again prevalent in Key West. A child of one of the medical officers was allowed to go there, and soon after her return, was taken with yellow fever; and from this *focus*, it spread among the garrison, at that time consisting of only one small company of fifty or sixty men, and one officer. In a short time, the commanding officer, the hospital steward, his wife, and sixteen or eighteen of the men, were *dead*, and the rest were saved by precipitately evacuating the fort.

Last year, 1873, yellow fever appeared epidemically in Memphis, Shreveport, Pensacola, Key West, Dry Tortugas, and to a considerable extent, in Mobile, New Orleans, and other places.

At that time, I was in the U. S. Marine Hospital at Mobile, and the history of its appearance in Mobile, from the report of the board of health, and my own observations, was substantially as follows: A man by the name of Dixon, a resident of northeast Texas, becoming alarmed at the approach of yellow fever towards his section, thought to fly from it, and in so doing, passed through Shreveport, where it was then raging in a malignant form. He passed on down to New Orleans, on to Mobile, and took a steamer for the "Eastern Shore," a noted summer resort, where he proposed stopping. While on the steamer, he was taken sick, brought back to the city, and carried to the city hospital. This was on the 11th of Sep-

tember. On the 13th, he died from *black vomit*. On the 18th, three *sisters of charity*, who had attended him, were attacked, and died. Before another twenty-four hours had elapsed, a vast number of people fled from the city, crowding and pressing into service every means of conveyance; in fact, panic and demoralization ensued. The city authorities, under the advice of medical men and board of health, established a cordon of police around the *infected* hospital, and filling large street sprinklers with a strong solution of carbolic acid and sulphate of iron, had them driven through the streets in that neighborhood twice a day, saturating the streets and gutters so that the atmosphere was loaded with the fumes of the acid. This solution was made of two gallons of the *crude* carbolic acid, and twenty pounds of the sulphate of iron to the barrel of water.

The Marine Hospital was in close proximity to the City Hospital—next square—and under the advice of the surgeon in charge, several pailfuls of the above solution were daily applied around the hospital, in the privies, and gutters, and drains. Within the hospital, half a pound of the crystalized carbolic acid was dissolved in a pailful of boiling water, and with a brush-broom, sprinkled through all the wards and halls daily. The walls were whitewashed with carbolized whitewash.

Under this regime, the disease was confined almost exclusively to that portion of the city. The wind, for ten or twelve days, blew constantly from the northeast, and the disease spread slowly to the southwest; but being persistently followed by the "carbolic acid brigade," surrounding it with all the antiseptic power possessed by carbolic acid and sulphate of iron, it was, as I shall always believe, *smothered* to a great extent, and prevented from becoming epidemic.

No case occurred in our hospital until the surgeon in charge contracted it, as he believes, by standing in front of the City Hospital late one evening, while it was prevalent there. He was taken on the 9th of October, and recovered in a few days. A friend who was stopping with us, having sent his family North; myself and a colored attendant, attended the surgeon during his illness. On the 16th, our friend was taken sick, and on the 19th, *died* from the disease in its most malignant form, as stated by a physician of upwards of forty years' practice, who was called in consultation. Complete suppression of urine took place thirty-six hours previous to death, and there was copious black vomit. Having been doubly exposed in administering to the wants of the two foregoing cases, I was the next seized, and I propose to give the symptoms, treatment, and progress *in extenso*.

About 9 P.M., October 19th (about four hours after the death of our friend), I was seized with rigors; cold flashes played up and down the spinal column, seeming like the slapping of a towel saturated with ice-water, upon it. Apprehending the onset of yellow fever, I took thirty grains of quinia, a hot pediluvium, and went to bed. An intense headache set in, so that I could not rest, and at midnight I got up and sat by the fire until morning, when I proceeded about my duties. So long as I kept *going*, I would partially forget that anything was wrong; stopping for a moment, it would seem

as though every organ in the body was at odds and ends. About noon, feeling satisfied yellow fever had me in its grasp, I set about preparing for it. First, thirty grains hydrarg. mass was given me; two hours after, a large saline cathartic, and an enema. As soon as the bowels moved, thirty grains quinia, a hot mustard bath, then placed in bed, rolled up in several heavy blankets, a fire built, bed drawn up to it, and hot bricks rolled up in towels wrung out in hot water, and placed at the small of the back and feet. I then had intense headache, excruciating pain in lumbar region, suffused eyes and countenance, a tongue coated with a whitish fur, apparently an eighth of an inch thick, and quick pulse.

The fæcal discharges at first were natural, but soon became dark; and finally, black and ropy like cold tar, with a very fetid odor, adhering to the chamber like glue. My headache then left me. During the succeeding eighty hours, the treatment pursued was: Quinia, gr. v.; acid sulph. dil. *m.* xx. every two hours. The hot bricks were constantly changed as fast as they became cool; virtually, making a "*sweat-box*" under the seven or eight blankets. With an occasional draught of warm orange-leaf tea, causing copious perspiration, which was encouraged by all possible means. On the second day my stomach became quite irritable, but a dose of the acid quinia mixture seemed grateful to it, and by turning on the right side, I could almost imagine I felt the irritating material pass out through the pyloric orifice. In the course of the attack, I had several evacuations of the black fetid tenacious stools. I did not close my eyes or lose my consciousness until about 3 A.M. of the fourth day, when the disease seemed suddenly to leave me, and I fell into a sound sleep and slept until the afternoon, when I woke up, feeling refreshed and able to get up and go about my business, but kept my bed as a matter of precaution until the 27th, when I got up and went down stairs, and next day resumed my duties. As soon as convalescence was established, a voracious appetite manifested itself, and my tongue, which, in the meantime had become black, begun to exfoliate in patches and shreds, disclosing the raw and "beefy" tongue underneath the coating; and several days after when I saw my wife, she laughed at its ludicrous appearance. It was nearly two weeks after I had gone about my occupation, before it was entirely clear of the coating.

I paid particular attention to the condition of my pulse. During the first twenty-four hours, it was weak, thready, and compressible. During the second and third days, it gradually fell to 55, 50, and lower, and this condition alarmed me. I imagined I might die from sheer stoppage, if it kept on going down. This condition of the pulse could not be attributable to the sedative effect of the quinia (for I believe quinia in large and repeated doses has a sedative influence), because, while ordinarily a moderate use of quinia will, with me, produce fullness of the head, vertigo, tinnitus aurium, or almost total deafness; yet in this instance, although I had taken upward of half an ounce during four days and nights, it did not have any such effects, showing the large quantity taken was neutralized by the poison.

The same day convalescence was established in my case, one of the men who had nursed me was taken, and in all, nine cases occurred in our hospital; but, as heavy frosts had fallen during my attack, or in consequence of the antiseptic means again carried out, they were of a mild form, and all recovered under, essentially, the same treatment.

I took altogether, as before said, rather more than ℥ ss. of the quinia, and ℥ ij. of the acid sulph. dil., and I think this treatment to be the most correct, although many, if not most authors, decry the use of quinia in large doses. I do so upon the following hypothesis: According to Aitken, "Ammonia is universally present in the black vomit and breath; the urea of the suppressed urine is transformed by metamorphosis into carbonate of ammonia." The acid was given under the idea of neutralizing the tendency of the blood to become alkaline under this condition. The quinia was given with a view to counteract or destroy the poison. Quinia, which comes as near being a specific as anything we have in our *Armamentarum Medicamentum*, I have for a long time believed to act as an antiseptic. Calvert, I believe, has demonstrated, that a solution of quinia possesses the property of destroying certain minute forms of animal life, and I believe no harm can result from the use of quinia, however large or often repeated the dose may be, so long as the poison is not fully neutralized by it.

Again, believing the essential pathological lesion to occur in the kidneys, it was endeavored by the hot mustard baths, blankets, and hot bricks, to induce the skin to act vicariously for the kidneys. That it did, seemed confirmed by the strong ammoniacal odor given off by the skin, during the copious perspiration induced by these means. Diuretics are absolutely useless; their administration will only be adding fuel to the flames in the congested kidneys.

I have in the above narrative stated what I have observed, in part, in regard to yellow fever, from which I have come to the following conclusions: That it is *contagious*. In support of this, I cite the case of Fort Jefferson, in 1867 and 1873; Fort Morgan in 1867; Mobile in 1873. In all these instances, the *importation* on the *person*, and its propagation therefrom, was as clear as any event that can occur among men. In each of these instances, certain parties had been exposed to yellow fever at some distant point; arriving at their posts, or places where it was not, were, after a short period of incubation, seized with it; the next to be attacked would be those attending them, and so on. Let me cite another instance: While the surgeon of the hospital at Mobile was ill, five seamen from the ship "W. A. Campbell," just in from Liverpool, came to the hospital suffering from rheumatism or venereal diseases. Not having their hospital permits properly authenticated, I took them into the surgeon's room, in order that he should decide as to their admission or not. They were probably in the room five minutes. Several days after, *three* of the five were almost simultaneously attacked with yellow fever. I do not understand the term *contagion*, unless these instances establish it in a measure. It is not necessary that a person be

brought in immediate contact with those having yellow fever in order to be infected, any more than in case of small-pox, which all admit *is* contagious, yet one of our professors has in his lecture, related an instance where small-pox was communicated from the burning of an infected bed, to an invalid several hundred feet distant. It is certain, however, that the radius of contagion of yellow fever is extremely limited. It does not militate against the contagion of yellow fever to say, that because *some* will be infected, others will not, who have been equally exposed. The same phenomenon is seen in all known contagious diseases — scarlatina, *par excellence*—nor that it occurs sporadically as well as epidemically. This is also true of the admitted contagious diseases. There are other necessary elements requisite for the propagation of yellow fever, as well as other contagious diseases, besides simple contact. In this case, the principal one seems to be an accumulation of animal matter, and the exposure of the same to the surrounding atmosphere. The drainage of our southern cities is notoriously bad; mostly superficial, and is of little consequence in the removal of the accumulations of years. The privies are shallow pits, with no outlet; and if cleaned at all, the contents are necessarily exposed to the atmosphere by the night scavengers. Therefore, I believe, that if the removal of all animal matter, or its thorough disinfection or destruction could be accomplished in our southern cities, yellow fever would never present its former malignancy and fatality. While this cannot or will not be done, I am firmly convinced that the free use of carbolic acid will prevent yellow fever from becoming epidemic. This has been done in New Orleans for several years; where, on the appearance of yellow fever, its *foci* has been instantly surrounded by the "carbolic acid brigade," with the result, at least, if not of hemming it in on all sides, destroying its virulence.

As to the connection of yellow fever with malaria, I have shown, in the cases of Forts Morgan and Jefferson, with but little malarial influences, it has displayed all its destructive effects; while at other places, with overpowering exhalations of miasm, it does not appear. Moreover, I have shown, in all the instances related, that it owed its origin to importation on the person of some one or other. It has been said, that it has been carried in the hold of a ship from an infected port to another, where it has not been previously—that is, a section of infected atmosphere has been locked up, so to speak, in the hold of a vessel, and carried to another port —even across the Atlantic, and upon liberation, propagated the disease. But these ships are navigated by human beings, and unless some of those on board have had it at the port of infection, or during the voyage, I doubt its propagation at any port free from it; consequently, a vessel coming from an infected port, unless she should have had cases on board, is never put in quarantine, and so the theory that it propagated through the person, is an admitted fact.

Finally, should it ever be my fortune to be located in a place liable to the irruption of yellow fever, I would recommend the removal of all animal matter, or its thorough disinfection by means of carbolic acid. In case

of its appearance, I would make free use of it in and around all buildings where it may exist, with as near absolute non-intercourse as practicable. I believe carbolic acid holds an almost unlimited power over the germs of yellow fever, and in many respects, is one of the greatest additions to our stock of therapeutical agents in other diseases, and causes of disease, as well as the specific one under consideration.

In the treatment, I would adopt that indicated, to-wit: The free evacuation of the alimentary canal; the free use of quinia; every means in our power of hastening and promoting active diaphoresis, and especially good nursing.

There are many interesting facts in regard to yellow fever, to be gleaned from "the books," by which this paper could have been extended, *ad infinitum;* but as they are accessible to all, I close without reference to them.

Editorial Department.

THE WAY THEY DO IT.

CANCER DOCTORS have some "ways that are dark, and tricks that are vain," like Bret Harte's "Heathen Chinee." Their system appears to be the same in outline wherever the rascals exist, and is essentially as follows:

1. He who aspires to the dignity of a "Cancer Doctor," must provide himself with an efficient caustic, or set of caustics, which may be used in the form of a powder, paste or plaster.

2. The quack must disguise the articles by suitable coloring materials, and stoutly deny that they are caustics.

3. He must advertise largely that the great Dr. Tumorsmash will "take out the cancers without the use of knife or caustic, and without pain," and guarantee the cure.

4. When the patients flock in, he must pronounce everything a cancer, whether it be a wart, corn, fatty tumor, ulcer, necrosis, sarcoma, or what not.

Now he is ready, and his success will depend upon his enterprise in carrying out the plan.

Honest John Leatherhead, the shoemaker, has observed a lump upon the surface of his thigh, in fact an encysted tumor. It gets in the way of his lapstone, gets hit with his pegging hammer, and, when it is hammered too much, becomes swollen and tender. Mrs. Leatherhead has read Dr. Tumorsmash's handbill, and advises John to go and see him. John, who has eyed the swelling for many a month with fear and suspicion, determines to have a talk with the great man, especially as his "consultations are free." He dresses in his

best, and presents himself. The quack views him from head to foot, and draws him out in conversation, to gauge the "size of his pile." He then looks at the encysted tumor, and, with solemn and ponderous dignity, pronounces it a cancer of the most malignant type. John turns pale, and his leather head shakes on his shoulders. Can he be cured? Yes, says Dr. Tumorsmash, but it will cost $500. Leatherhead pleads poverty, but finally pays $100 in advance for a guaranteed cure.

"I believe you take out cancers without pain," says he.

"Certainly," replies the quack, "that I always do. However, I must put you under a course of preliminary treatment for a few days. This preliminary treatment is a little painful, but you can bear it, and then I will remove the tumor without the slightest suffering."

Dr. Tumorsmash now administers a good dose of morphine; next he surrounds the tumor with a circle of adhesive plaster to protect the adjacent skin, and claps on his caustic. This hurts severely, but then it is only "preliminary treatment," and meanwhile he plies the morphine vigorously to keep Leatherhead as quiet as possible. After a proper number of hours, when he judges that he has produced a sufficiently deep slough, he removes the caustic and applies poultices. The pain now ceases, and the poultices are continued until the eschar is fully separated from the living flesh. Now the quack is ready for his grand operation of removing the tumor "without pain." The patient's friends assemble, the poultice is removed, and the surface sponged clean. Dr. Tumorsmash discourses as follows: "My friends, I have called you in to see one of the triumphs of modern science. If you look at this tumor, you will see how wonderfully my medicine discriminates between the cancer and the natural flesh. Look at this deep groove (pointing to the line of demarcation). That was the boundary of the cancer, and you see that this wonderful remedy has followed the disease everywhere exactly up to that line, and has nowhere gone a hair beyond it. It has the property of killing the cancer to its remotest roots, and has no effect on healthy flesh. I will now proceed to remove it." Suiting the action to the word, he gracefully seizes the rotten mass with his forceps, and lifts it out of its cavity "without pain."

Leatherhead is amazed, and profoundly grateful. In the course of three months the ulcer is healed, and for the rest of his life he and Mrs. Leatherhead never weary of sounding the praises of Dr. Tumorsmash.

A medical friend of mine once went to St. Louis to see a "Cancer Doctor" who, by dint of much advertising, had gathered a great array of patients from the whole West, and was doing a magnificent business. My friend began to negotiate with him to buy his secret.

The quack was willing to sell for a good price, and took him around to see his patients. There was a legion of them. Some had encysted tumors, some fatty tumors, some warts and moles, and some chronic ulcers, etc.; but in all that collection there were only three or four cancers. After returning to the hotel, the two sat down to smoke and talk together. Said my friend, "We have been around and seen a great number of cases, now how many of them do you

call cancer?" The quack replied, "Oh, well, I *call* them all cancer, but of course you and I know that only three or four of them are really so. If you recall my conversation, you will remember that I did not promise those particular patients a cure, but the rest of them I shall cure to a certainty."

Aside from the energy of his advertising, the reputation of the "Cancer Doctor" depends on the fact that the great majority of the tumors under his treatment are innocent, and of course will not return after they are removed.

Domestic methods sometimes obtain quite a reputation for curing cancers. One plan is to express the juice from sheep-sorrel and dry it down to the consistency of treacle. You now have an impure but concentrated preparation of oxalic acid, which, locally applied, has cured many a case popularly supposed to be cancer. It is said to be severely painful.

An old farmer in this State used to make a cancer cure as follows: He went to the woods and obtained the bark of a certain tree, which he burned to ashes. He then leached the ashes, and boiled the ley down to an impure potash. With this as a caustic, he proceeded to eat out various things which he supposed to be cancers, and cured them. He made a secret of the species of tree from which he took the bark, and sold or gave the secret to a young man, who wanted me to test the article for him by experimenting on my patients, while he retained his wonderful secret to make his fortune, if it proved successful. He supposed that the virtues of his potash depended on some special property of the kind of tree from which it was obtained.

Tannin, burnt alum, and sundry other articles which act by their desiccating power, will kill a structure of tissue on the surface of fungous growths, polypi, etc., and, by frequently scraping off the eschar and re-applying, the powder can be made to destroy considerable bulky growths without pain. I have not been able to make them act on the more solid tissues of scirrhus, and they, like all other local remedies, leave the contaminated lymphatic glands still in existence. E. A.

COMMENCEMENT EXERCISES OF THE CHICAGO MEDICAL COLLEGE, MEDICAL DEPARTMENT OF NORTHWESTERN UNIVERSITY.

THE public exercises connected with the Sixteenth Annual Commencement in this College, took place on Monday and Tuesday, the 15th and 16th of March, 1875. On Monday afternoon, the candidates for graduation, with the Faculty of the College, and any members of the profession who chose to attend, assembled in the College Hall, and devoted two hours to the reading of theses, and the public examination of the candidates on the topics discussed in their respective papers. The class then repaired to the amphitheatre of the Mercy Hospital, where they witnessed

the performance of the operation for the removal of stone from the bladder, by Prof. E. Andrews.

The patient was a boy, aged only four years; but the calculus was of large size.

On Tuesday, the Commencement Exercises, proper, commenced in the College Hall, at 2½ P.M. Before the hour, the room was completely filled by an audience of gentlemen and ladies. A good band of music was in attendance, and at suitable intervals, added much to the enjoyment of the occasion. Prayer was offered by the Rev. Arthur Edwards; the certificates of examination for the under graduates were presented by the Secretary of the Faculty. The Professor of Practical Surgery also presented special certificates to those who had served as assistants in the hospital. The Dean of the Faculty awarded the prize for the best thesis, to W. H. H. Hutton; and for the second best, to Chauncey A. Kelsey.

C. H. Fowler, D.D., President of the Northwestern University, then conferred the Degree of Doctor of Medicine on forty-five candidates, who had been duly recommended by the Faculty, and accompanied the same by a brief, but very appropriate charge. This was responded to, in behalf of the class, by H. D. Hardacker, A.B., in a very happy manner.

Then followed the formal Valedictory Address, by Prof. W. E. Quine, on *Success*. This performance was one of more than ordinary merit, and was listened to with close attention, and much real profit. The collegiate year just closed, appears to have been one of gratifying prosperity. The whole number of students in the different classes was 140. The number of Degrees conferred was forty-five, namely; three ad eundem, two honorary, and forty in the regular course. In regard to the preliminary education of the graduates in the regular course, we were gratified to learn that seven were graduates of literary institutions; and all but two had received more or less mental training in the higher schools and colleges of the country. We still hope the time will come, when no young man will think of commencing the study of medicine until he has a thorough mental training, and a good knowledge of the sciences.

AGUE AS A PROVIDENTIAL DISPENSATION.

THE wisdom and kindness of Providence in the allotment of disease, is not always appreciated by the sufferers themselves, at least. Mark Twain in his narrative of "Old Times on the Mississippi," in the March *Atlantic*, makes clear, however, the happy and providential aspect of one disease, at least. Describing graphically the life and aspect on the low bottom lands bordering the river, during a big rise and overflow, he says:

"There were crazy rail-fences sticking a foot or two above the water, with one or two jeans-clad, chills-

rocked, yellow-faced, male miserables roasting on the top-rail, elbows on knees, jaws in hands, grinding tobacco, and discharging the result at floating chips, through crevices left by last milk-teeth; while the rest of the family, and the few farm animals, were huddled together in an empty wood-flat, riding at her moorings close at hand. In this flat-boat, the family would have to cook, and eat, and sleep, for a lesser or greater number of days (or possibly weeks), until the river should fall two or three feet, and let them get back to their log-cabin and their chills again—*chills being a merciful provision of an all-wise Providence, to enable them to take exercise without exertion.*

Correspondence.

A LETTER FROM PARIS.

EDITORS MEDICAL EXAMINER: Two women (Mrs. Garnet Anderson, of London, and Mrs. Putnam Jacobi, of New York,) have already received the degree of Doctor in Medicine from the French School, and this winter there are about a dozen women inscribed at the Faculty of Paris. Yet the profession in France does not agree as to the propriety of having women doctors so unanimously as might be supposed. Lately the *Union Medicale*, a journal occupying an influential position, has contained two articles upon "*femmes - medicins*," which are very marked in their opposition to woman's entrance upon a medical career. The writer, after enlarging upon the distaste with which one views a woman in the dissecting or post-mortem room, turns his attention to the practical life that follows upon medical studies: "And, in the exercise of the art, suppose the doctress reaches the eighth month of a pregnancy (a circumstance which will naturally be frequent if the doctresses are numerous), see this woman entering the bed-room of her patient, preceded by an enormous belly, approaching with difficulty to feel the pulse, to auscult in front and behind, an object of repugnance for the patient, if man or woman; an object of fright from her deformity, if the patient is a child. The spectacle would be grotesque, if it were not pitiful." Further on we find the following: "A young woman belonging to one of the most respectable families of Paris, mother of two children, reached her third pregnancy. From an unfounded sentiment of prudery she did not wish to receive the care of a physician during her confinement. She was assisted by a midwife. At the end of the labor, a grave uterine hæmorrhage declared itself. It became formidable. What

did the woman-doctor do? She fainted! It was the way to relieve herself from all responsibility, but during that syncope the poor young mother perished. I ask, do we see accoucheurs, in the presence of an uterine hæmorrhage, faint, in place of arresting the flow? Syncope is in the nature of woman; it will be necessarily one of the attributes of a doctress."

In concluding the first article, the writer argues that woman was not intended for medical investigations: "No, she was not created to meditate upon a skeleton, to explain the state of our organs by percussion and auscultation, to plunge her small hands into the abdomen of the dead, and there search the cause of death." Mentioning the University of Zurich, the writer calls attention to the disturbances made by the female students (many of them were Russians), on account of which the Emperor of Russia issued a special decree, forbidding the right of practice in Russia for any woman with a Zurich diploma. It is related that one of the professors at that institution, having a "sore throat," requested the students not to smoke in the lecture-room. The next day the male students threw away their cigars before entering, but the females entered with immense pipes in their mouths, and smoked "*comme des caporaux.*"

These reflections upon the character of women as medical students do not accord with my observations in Paris. I have yet to see one of them act in a way to attract attention. Though in no way approving their choice of a profession, I have been struck by the earnest, unassuming manner in which they conduct themselves. As a rule, they are attired very plainly in black, wearing little or no jewelry, but there is one rather pretty little woman, of perhaps twenty years (this is dangerous ground, so I must say, as the French do, "under all reserve,") who attends the lectures and demonstrations on practical anatomy, wearing the bright colors that best become her, but which form a striking contrast with the surroundings. Her entrance in the lecture room is generally acknowledged by some few suggestive "smackings" of lips, but thus far I have noticed no other manifestations from the students.

Something of a rivalry appears to exist at present among the eye specialists of Paris, in regard to dispensary service, and medical visitors are received with a great deal of attention. Desmarres (fils), Galezowski, and Wecker have the principal clinics. The latter has quite an elegant mansion for his free service on the Rue du Cherche-Midi, while the other two content themselves with less pretentious rooms on the Rue Hautefeuille and Rue Dauphine.

I notice that anæsthetics are used rather sparingly, and very many operations, even to enucleation of the ball, are performed without ether or chloroform. Undoubtedly, this is a neat mode and agreeable for the operator, but hardly in accordance with our American ideas of justice to the patient.

Solutions of atropia and the nitrate of silver occupy their usual prominent position in these eye clinics, but Galezowski has taken to operative interference in two diseases that are classically treated with caustics. I refer to chronic granulations of the lids and purulent ophthalmia. In obsti-

nate or severe cases, he excises a small portion of the conjunctiva, and follows the operation with very weak solutions of nitrate of silver when the inflammation has subsided.

For the granulations, the excision is made in the cul-de-sac, from the palpebral conjunctiva, within or among the posterior granulations. Complete rest for a day or two, and then applications as mentioned (Argent. Nit. grs. i. ij.; Aquæ ℥ j.). With this line of treatment he claims to radically cure the most obstinate cases.

As to the ophthalmia, the operation is but changed in position. The excision is made in the orbital conjunctiva, and Galezowski's reasoning is, that the pus being harmless, the excision relieves the tension, and thus counteracts the tendency to perforation of the cornea. His results, thus far, have been very satisfactory.

Since Huxley exposed the fallacy of Bastian's experiments in regard to spontaneous generation, little has been attempted in that line; but now, so distinguished a body as the French Academy of Medicine finds itself called upon to investigate that subject. Dr. Arthur Bergeron has been examining, microscopically, the contents of abscesses that have never been in contact with the exterior air, and he found that the pus from adult subjects contained animalcules (protozoaires) while that from young subjects gave no trace of them. From these facts Dr. Bergeron concludes that he has made a great discovery, and that he has found the solution of the great question of spontaneous generation, "from simple modification of organic matter without intervention of germs or ferments."

M. Pasteur has brought these investigations before the Academy of Medicine, but at present, that body, not having been directly addressed by the investigator, is unable to appoint a committee of inquiry. Perhaps it is just as well that this unsurmountable barrier of dignity should prevent the Academy from giving much serious attention to this subject, but these researches are being pretty widely commented upon by the journals, and doubtless the question will be thoroughly ventilated.

C. C. MATTESON, M.D.

PARIS, Feb. 25th, 1875.

Dr. CAZIN has had occasion to practice the Cæsarian operation in a case of uterine fibroids, and has had the good fortune to save mother and child. He operated on a woman, aged thirty-nine, in whom, toward the sixth month of pregnancy, fibroid tumors were recognized in the posterior and inferior wall of the uterus. Labor set in the seventh month; after four days of pains, the waters ruptured and the hand escaped, the child still living; but as it could not be extracted either by forceps or by version, recourse was had to the Cæsarian operation. The most minute precautions were taken; there were hæmorrhage and syncope, inertia of the uterus, distention of the belly to such a degree that it became necessary to puncture the bowel to give exit to gas; there was vesical paralysis, and an abscess formed between the uterus and the abdominal wall. In spite of all these complications, the patient got well; and the child, baptized Cæsar, throve well. This operation was done some months ago, but the author has ascertained that the fibroids are in process of diminution.—*Gaz. Med.*

Society Reports.

TRANSACTIONS OF THE CHICAGO SOCIETY OF PHYSICIANS AND SURGEONS.

REGULAR MEETING, MARCH 22D, 1875.

Reported by Ralph E. Starkweather, M.D.

THE Society met as usual at the Grand Pacific Hotel, the President, Dr. Bartlett, in the chair.

Dr. Etheridge read the following report from the Committee on Therapeutics:

ERGOTINE.

Dr. E. R. Squibb, of Brooklyn, submitted some notes to the American Pharmaceutical Association in 1873, which are published in the Association's proceedings for that year, on Ergot and Ergotine. After speaking of the market value of ergot crude, and its pharmaceutical manipulations, he speaks as follows of ergotine, so called:

"The existence of one or more active principles, which may be isolated for therapeutic use, has been very generally believed, and various substances have been extracted and sold under the name of ergotine—those of different makers having different properties and different doses, but all producing some of the effects of ergot, though in different degrees. After a careful attention to the literature of this subject, and comparing it with the results which seem to have been realized in practice by experience, the writer does not believe that there is an active principle separable from ergot, which, in any proper sense, represents the drug. Like senna, rhubarb, and many other drugs, its effects seem to be dependent upon a natural association of its various separable elements. If this be true, there is no such thing as ergotine, and the various substances so called only represent the activity of the drug, as they represent more or less perfectly its entire composition. Of course, certain of its constituents, such as lignin, starch, fixed oil, gum, etc., are known to be inert, and such being excluded by choice of a proper menstruum for extracting it, the nearer its preparations come to representing or containing all the remainder of the drug the better."

ERGOT—AQUEOUS AND ALCOHOLIC SOLUTIONS OF.

These two differ in their effects on the circulatory apparatus. The aqueous solution excites the activity of the cardiac inhibitory centres, and the vaso-motor centre in the medulla; it slackens the pulse, narrows the calibre of the small arteries, and increases the blood-pressure. Very large doses paralyze the heart at once, and so effectually that the induced current fails to restore it. These effects on the heart and vessels are not at all produced by the alcoholic solution.

Thel atter produces symptoms akin to those of æro-narcotic poisoning, viz.: irritation of the mucous membrane of the stomach and bowels, tonic cramps, and agitative violent spasms—symptoms which cannot be produced by aqueous solutions of ergot.

ERGOTINE, IN VARICOSE VEINS.

Dr. Paul Vogt, assistant surgeon in the out-patient clinic at Greifswald, first tried ergotine injections for varicose veins. In the *Berliner Klinische Wochenschrift* for March 4, 1872, he first reports the use of this drug as above indicated. An extensive varix, which had occupied the leg for years, yielded in the course of a week to two injections. Subsequently there followed diffuse light inflammation, leaving a hard, circumscribed infiltration, which eventually subsided.

In many other cases he has used, in a similar manner and with as remarkable result, as in varicocele, hæmorrhoids, certain forms of angioma, telangiectasis, etc.

The most generally-accepted idea is, as to the modus operandi of ergot subcutaneously, that diminution of the calibre of vessels is produced by the drug stimulating the smooth muscle of the veins and arteries to contract. In its use in varicose veins, it doubtless partially produces diminution of the capacity of the veins, by producing the inflammatory infiltration above mentioned, which directly compresses the veins.

In the same periodical above mentioned for August, 1874, Dr. Max Schuler stated, as a result of many experiments, that ergot produces contraction of arterioles. The smaller the vessel, the longer and firmer is the contraction. Arteries increase proportionally in smooth muscular fibre as they become smaller. From this fact it is inferred that ergot exerts its effect on this muscular fibre, *not* necessarily through the vaso-motor nerves, for the same effect—viz., vascular contraction—could be secured in a part injected with solution of ergot after the sympathetic nerve supplying the part was cut.

So firm indeed is this contraction, that it cannot be changed by persistent inhalations of nitrite of amyl.

From a knowledge of this effect of ergot on the smaller vessels, to the use of this medicament in hæmorrhages, as epistaxis, hæmatemesis, hæmoptysis, hæmorrhage from the bowels, kidneys, etc., is but a step.

A close observer of medical literature sees, of late months, very many accounts of the use of this drug in these troubles hypodermically. Ergot by the stomach will produce none of the effects that can be called hæmostatic; subcutaneously, it will.

Dr. Drasche, of Vienna, reports many cases of hæmatemesis being treated with subcutaneous injections of ergot. The point of selection was the neighborhood of the pectoral muscle. Sometimes more than one injection was necessary. After the first one there is always a diminution, and, in many cases, a cessation of bleeding.

One phthisical young man, who had had violent epistaxis every morning for a week, and had been unsuccessfully treated with ice and perchloride of iron, was completely cured after two one-grain injections of ergot.

In most cases of hæmatemesis ergot was used after the ordinary means had been used in vain, and the checking of the hæmorrhage was prompt.

It was successful after ergot had been used in large quantities in the stomach.

In hæmorrhages in scorbutus ergot has been successfully used, though the amount and duration of the local irritation were considerable.

SULPHIDE OF CARBON IN THE TREATMENT OF ATONIC ULCERS (SORES) AND CHRONIC ULCERATIONS.

[*By Paul Guillaumet, Interne of St. Lazare.*]

"If there is any affection upon which the therapeutical armamentarium has been largely used from time immemorial with very variable success, it is certainly chronic ulcers.

As I have thought that there is a certain interest attaching to any new remedy addressed to these obstinate affections, I desire to speak of the local application of the sulphide of carbon in ulcerations, differing in characteristics and origins, but presenting, all of them, common features, viz., *atony* and *chronicity*, with a tendency to extension, and a total absence of reparative nature and cicatrization."

This agent was used thus in ulcerations first, in 1867, by M. Michel, when he was an interne in Saint Lazare. Its abominably nauseous odor, and its toxic action are the predominant characteristics of carbon sulphide, which have doubtless kept it from extended use.

The German physicians have used this agent in arthralgias and neuralgias successfully, probably through its refrigerant and anæsthetic action. Compresses soaked in carbic sulphide in some aromatic essence were placed over the painful part, and renewed from time to time till relief followed. Krimmer used it in the treatment of white swellings. Ewenbull used its vapors mixed with those of iodine in certain affections of the eye and ear. It has also been used upon the erysipelatous redness of chilblains. These constitute the only uses, externally, to which this agent has been devoted.

The writer details three cases, selected from a large number thus treated, one of which is here given in full.

"CASE I. — *Large ulceration of the right labium majoram, of four and a half months' duration, in a syphilitic subject. Cure in fifteen days.*

Alice V., æt. 23, admitted May 25, 1874. Upon the inner surface of the right labium majoram, extending a little to the outer surface, she has a large ulceration, extending nearly the whole length of the labium, measuring three centimetres in breadth. It is atonic, has a grayish base, with irregular serrated borders, and has a depth of about four to five millimetres.

The patient evidently has syphilitic antecedents. As to the subject of the origin of this ulcer, she says that she experienced a severe itching produced by some small pimples, grouped together in that region, and that she scratched them with her finger-nails and produced an excoriation, which, irritated by frictions of the tight clothing, became inflamed and produced an ulceration. For some days subsequently she paid no attention to it, but seeing it increase daily instead of diminishing, she concluded to use some poultices and cerate. Then she visited St. Louis Hospital, and was regularly cauterized every eight days with various caustics.

When she entered this hospital she had had this ulceration four and a half months, without its being in the

least diminished. From this time the sulphide of carbon was used and with success as complete as unexpected. Thirteen applications in *fifteen days* sufficed to produce complete cicatrization of the ulcer."

Sulphide of carbon has been used with good results in the treatment of syphilitic ulcerations, ulcerating tumors, ulcerations of the neck, of the vagina, of the vulva, corroding ulcers, ulcerations in scrofulous subjects, etc.

After the first applications of this agent there is no noticeable change in the aspect of the ulcer. After the fifth or sixth application a sensible amelioration and a very rapid course to cicatrization follow. The progressiveness of improvement is always so characterized by regularity that, by comparing a portion of the raw ulcer with a portion already healed over, the physician is enabled to predict exactly the number of applications still necessary to complete a cure.

It must be used with care because of its extreme volatility and nauseous odor. The method of applying it is as follows, according to the author: The bottle containing *pure* sulphide of carbon is held very near to the ulcer to be dressed; a piece of charpie is soaked in the liquid, and squeezed upon the mouth of the bottle to expel any excess of the drug; then the piece of charpie is lightly and rapidly brushed over the surface of the ulcer, which is immediately covered with a powder of subnitrate of bismuth, or of starch. These powders, inert of themselves, play a double part: they isolate the labia (when one of them is the seat of the sore), and diminish evaporation of the medicine which is accelerated by the body heat.

The writer thinks that its action is very obscure. It coagulates the albumen of the ulcers, and it seems neither to hasten nor retard fermentation. He says the following changes occur after applying the medicament: "A change of color of the tissues occurs; this modification, which is not very evident in pale ulcers, is plainly shown on those whose granulations are active; the tissues become pale. This decoloration is not of long duration. At the end of a certain time it disappears, to be replaced by a very red blush. This is very easily demonstrated upon granulating ulcers. Then comes the pain; a pain almost instantaneous, very severe, but very fugacious. I have seen in certain subjects at this time a period of anæsthesia succeed which lasted several hours, whilst the painful period does not exceed twenty to sixty seconds in most patients. This pain, very acute after the first few applications, diminishes in a few days, to be almost none at all after the last applications. As a rule, it may be said that its intensity is in inverse ratio to the number of the dressings."

"The action of this medicament is so rapid upon recent sores that after the first or second dressing a change is readily noticeable. It is much less rapid upon very old ulcers, at least after the first applications. It is not rare to dress an old sore five or six times before obtaining an appreciable modification. But from the day that a change is noticed the process of cicatrization is very rapid. The amount of the sulphide to be used having a great influence upon the results to be obtained, should be proportional to the ancientness and vitality of the ulcer. In using a rather

large dose of carbon sulphide, I have not had any scarring follow, nor poisoning accident if minims were used, but this has seemed to retard rather than accelerate cicatrization."

In conclusion, the author summarizes the principal characteristics of this agent in the following propositions:

1. "Sulphide of carbon is a powerful cicatrizer.

2. "Its action is limited and rapid. It is wholly local, and does not produce a single accident which follows the inhalation of its vapors.

3. "Its application is accompanied with a pain sometimes very severe, proportional to the susceptibility of the patient, but of a very short duration in most patients, followed immediately by a period of anæsthesia which is not constant.

4. "Sulphide of carbon acts upon ulcers of various kinds, (syphilitic, scrofulous, diphtheritic, etc.,) and changes them all beneficially.

5. "This is a valuable agent in the treatment of wounds and ulcers, presenting the common characteristics of *atony* and *chronicity*."

Dr. Bevan, from the Committee on Clinical Reports, next read the following notes of cases occuring under his care in Cook County Hospital:

CHRONIC MYELITIS.

Peter Lorentzen, age 50; laborer; Dane; admitted December 4th, 1874.

The patient states that he was well until a year ago last October. While working on a ladder, he slipped, and fell some sixteen feet, striking on his back. He was confined to his bed four months, when he was again able to resume business. After working about three months, he experienced a recurrence of the pain in the side and back. This soon became so severe, that he again discontinued work. He came to the hospital last June, remaining under treatment some five weeks, and again returned home. Ever since this time, the pain has steadily increased. For the past four weeks, he has been much worse; he has been unable to walk; says his legs are getting weak, and complains of sharp, stitching pain, shooting toward the extremities. Appetite has always been good. Bowels inclined to constipation.

On admission, patient somewhat emaciated; face, anxious; has the appearance of suffering; feels more comfortable when the thighs are flexed.

On examination, no tenderness along the spine; no swelling or pain in any of the joints, although the patient thinks he is suffering from rheumatism. In walking, he has to be supported, and holds the lower portion of the spine in a fixed position, and has a kind of rotary gait. The left hip is prominent, the trochanter apparently standing out. Pressure, however, does not cause pain. He is ordered pot. iodid. gr. vij, and strych. sulph. gr. $\frac{1}{30}$, in a simple bitter tonic, three times a day.

Dec. 18th.—Patient sleeps poorly at night; the pain seems to be worse.

Jan. 2.—The patient still complains of severe pain in left lumbar region. Sleeps poorly at night. Is becoming more emaciated. Appetite pretty good; bowels costive.

Feb. 1.—Patient thinks he has not improved any since he came into the house. Cannot stand or walk. Has constant and severe pain in the left leg, from the hip to the knee, interfering with sleep.

Feb. 4.—The potass. iodid. and strychnia were discontinued, and instead, fl. ext. ergota ʒ ss., three times a day, and a mixture of equal parts tr. iodini and glycerine, to be applied over the spine and sacrum.

Feb. 15.—Patient has continued the use of the last prescription up to this time. He says he has a good deal less pain; sleeps well; has a good appetite; and, in fact, feels much improved. Pretty fair motion of the legs.

March 1. — Continued improvement.

SUBACUTE MENINGITIS.

Alice Morris, aged 21; laundress; native of United States; admitted January 19, 1875; died Feb. 4, 1875.

About three months ago, patient was working in a laundry as ironer, in a damp basement where there was no fire. In changing her irons, she was compelled to go from this cold room into the drying room, which was always kept at a high temperature, thus constantly exposing herself to extremes of temperature. She had been working thus about four months, when she began to have pain in the head, nausea, and vomiting. Would wake up in the night with an attack of pain in the head; would eject the contents of the stomach and feel relieved. The attacks were most apt to occur about 3 o'clock, A.M.

The pain in the head constantly increased; became throbbing in character. She soon had to discontinue all work, and would sit around for several hours, stupid with pain. The sight became impaired; light was painful; luminous objects seemed to float before the eyes; smell and taste were both partially lost. All food had an acid taste. Bowels costive, moving once or twice a week. She has a severe shooting pain in the back of the neck, aggravated by motion or pressure. Sleeps poorly. Is dizzy, and unable to walk unsupported. She can scarcely remember anything, even common events.

On admission, patient poorly nourished; skin normal; tongue flabby and tremulous, covered with brownish fur. Prefers to lie on the side, with the limbs drawn up, and eyes shaded from the light. Slight movements of the head or neck cause facial contortions, indicative of severe pain.

Pulse 50. Resp. 22.

℞.—Potass. brom., gr. xv.
Strychnia sulph., gr. 1-30.
Three times a day.

The progress of the case was steadily downward.

Feb. 1.—Patient seems to be in an almost comatose condition. She is roused with difficulty, and cannot make an intelligent response to questions. Urine and fæces pass unconciously. Takes no nourishment; will not swallow, but allows liquids to run out of the mouth. Pupils dilated.

Feb. 4.—*Died.*

The autopsy revealed some tuberculous deposit in the lungs. On opening the brain-box, several ounces of clear serum escaped from beneath the membranes of the brain and cord. Other organs healthy.

EPILEPSY.

CASE 1.—Wm. Hutchinson, aged 24; bar-tender; native of United States; admitted January 27, 1875; discharged February 6, 1875.

Patient was always well until he was nine years of age, when he was struck upon the head with a hatchet. Does not remember whether he was much affected by it at the time or

not. (States that at the age of twelve, he was bitten by a mad dog). His health was good until eight years ago, when, while walking along the street on a very hot day, he suddenly fell, and was unconcious for an hour or two. During the next two days he suffered from several such attacks. During this time he had very severe pain in the head. One month later, he had a recurrence of the same kind of attacks, and the pain in the head was present also.

He enjoyed immunity from attacks until one and a half years ago, when he went through precisely the same experience. At this time, he was sick for two weeks, suffering from pain in the head, and occasional loss of conciousness. His friends said he was convulsed during the attacks, requiring several men to hold him. He has been a steady drinker for several years until last Christmas; since then he totally abstained until a week ago Monday, when he began to drink very hard for two days only. Last Saturday, he began having pain in the head and feeling drowsy. This continued increasing until the convulsive attacks returned again. He was brought here suffering from those attacks. Ordered

Pot. brom.,	gr. xv.
Chloral hyd.,	gr. xv.

Every three or four hours.

Feb. 2.—Patient seems to be improving slowly. The attacks are less frequent. He is ordered

Pot. brom.,	gr. xx.
Fl. ext. valerian,	ʒ i.

Three times daily.

Feb. 6. — Thinks he feels well enough to go home, and is discharged.

March 4.—One month later, patient was brought in with another attack similar in character. He is put upon pot. brom. gr. cxx. in the twenty-four hours, with the effect of speedily reducing the number of seizures and the cephalalgia.

CASE 2.—Emma Rauworth, aged 35; housewife; native of England; admitted February 6, 1875.

For the past seventeen years, patient has had occasional epileptic attacks, not traceable to any exciting cause, as the patient occasionally goes six or eight months without a fit, and then may have two or three at short intervals. Has had five children—three alive now, and healthy; two died in infancy. She menstruates regularly and easily.

Six weeks ago, the patient began to show signs of the present attack. She would sit down near the fire and drop into a partially insensible condition, resembling sleep, from which it would be impossible to rouse her. She would enjoy her natural slumber at night; would rouse up about 5 A.M.; soon after, would go into this stupor, and remain so until 3 or 4 o'clock P.M. On awaking, she seems trying to escape some imaginary danger, but in a few moments seems to revive and converse naturally. During the sleep, she does not know anything about what transpires. She has been moved from place to place, even several miles in a buggy, without the slightest knowledge of the event. She has lately complained of pain and sense of weight in the top of the head. She has lost flesh; never asks for food, but will take it, if offered, when awake. Bowels move regularly each day, and urine passes normally. She attends to these calls herself.

10 A.M.—She is now lying quietly in stupor; has been for four or five

hours; breathes easily. Pulse 74; resp. 12. Cheeks a little colored; muscles flaccid, with occasional twitching; jaws firmly closed; eyelids resist efforts to open; eyes rolled upward.

Feb. 10.—℞.—Pot. brom., gr. xx., three times a day.

11.—Had a well marked epileptic fit yesterday, but of short duration.

Increased the dose to gr. xxx., three times a day.

12.—Feels better; sleeps pretty well now most all night.

15.—Instead of a stupor, the patient now experiences a pain in the head, about 5 A.M.

20.—The pain is growing less.

21.—Was religiously excited, and is a little worse.

30.—Better again.

March 2.—Is ordered as a tonic,

Strych. sulph.,	gr. 1–60.
Ac. nit. dil.,	gtt. v.
In the infus. gent.,	℥ ss.

After meals.

During the discussion of the above papers, Dr. Bevan mentioned a case of diabetes mellitus which he had treated with good results by the use of the fluid extract of ergot, in doses (finally) of one fluid drachm four times a day. The amount of urine first voided was sixteen pints daily. Ten weeks after beginning treatment the amount of urine daily voided was only four pints, and very much less saccharine; the thirst and emaciation of the patient had become much less.

Dr. Owens queried whether there was any disease ergot would not relieve, and quoted a case of diarrhœa of several months' duration (at least seven months) which he had relieved by the use of wine of ergot. In regard to the sulphide of carbon, his experience in its use upon ulcers had been satisfactory. One of his patients had had an ulcer upon each leg. He treated one of them by elevating the limb and warm water dressings; the other he treated with the sulphide of carbon, and healed the ulcer quickly. The time lost by the first method of treatment was over two weeks.

The Secretary, Dr. Hyde, thought that in many instances chronic ulcers could be treated in no way more efficacious or expeditious than by cross-strapping and the starch bandage.

Dr. Powell mentioned two methods of treating ulcers of the leg: one by transplantation of the skin; the other by half-inch incisions, at intervals, around the entire ulcer. It would not be sufficient merely to remove and use epithelial scales—actual integument was needed. A piece the sixteenth of a square inch would suffice to make a dozen insertions, each of which would make a centre for granulations which would cover about an inch. Upon the coalescence of these islands of healthy skin, the ulcer would be healed. Little cuts should be made in the floor of the ulcer, and a piece of sound skin inserted.

Dr. Hollister adverted to a method formerly used by Dr. Brainard, that of placing upon the ulcer a piece of lint sprinkled with a little iodine.

Dr. Hyde had had good results in cases of ulcers from indolent buboes, in the employment, after the above method, of bromine.

Dr. P. S. Hayes said that in one of the preparations of ergot, acetic acid was used, about one per cent. being added to the officinal fluid extract, which rendered the liquid preparation more permanent; the acid has the effect

of removing all inert matter. Ergotine is not a simple body like the morphia sulphate.

Dr. Powell, in a case of double popliteal aneurism, had employed hypodermic injections of ergotine upwards of five weeks with no good results—one of the tumors even enlarged.

Dr. Etheridge remarked that in treating the varicose veins the injections of ergotine would be useless unless made near the varix. The local inflammation produced by the irritating alcohol might be sufficient to diminish the tumor. He never recommended the alcoholic solution for hypodermic injections; the alcoholic and aqueous solutions have no one effect in common. One grain of the aqueous extract represents one minim; this, properly diluted, may be used for hypodermic injection.

The discussion was continued to a late hour by Drs. Davis, Merriman, Henrotin, and others, accompanied by reports of cases.

THE ALUMNI ASSOCIATION OF THE CHICAGO MEDICAL COLLEGE.

THE Alumni Association of the Chicago Medical College met in the parlors of the Tremont House, March 15th, at 8 p. m.

Dr. F. C. Winslow presided.

A larger number than usual were present. Communications of importance were received from Dr. John M. Woodworth, of the United States Marine Hospital Service; from Dr. John Sundburg, of Galveston, Texas, and from Dr. George H. Fuller, now at Fort Hall Agency, Ross Fork, Idaho.

Dr. Wm. E. Quine resigned his position of Necrologist, and Dr. S. A. McWilliams that of Secretary and Treasurer.

Both of these resignations were accepted.

The Committee on Entertainment now announced supper to be ready, and invited all present to partake. This part of the programme was a decided success.

After supper, Professor H. A. Johnson was invited to address the Alumni, which he did in his usual happy and eloquent manner.

The Committee on Nominations made the following report, which was received and adopted: S. A. McWilliams, M.D., President, Class '66, Chicago, Illinois; H. H. Clark, M.D., First Vice-President, Class '70, McGregor, Iowa; H. D. Ensign, M.D., Second Vice-President, Class '75, of Chicago Marine Hospital; M. P. Hatfield, M.D., Necrologist, Class '72, 1604 State street, Chicago, Ill.; D. A. K. Steele, M.D., Secretary and Treasurer, Class '73, 883 State street, Chicago, Ill., to whom all communications should be addressed.

The Committee on Entertainment for the ensuing year are as follows: The President and Secretary, with Drs. Bond, Earle, and Hutchinson.

It is to be hoped that our Alumni will present at our next annual meeting many scientific and valuable papers.

S. A. McWILLIAMS.

125 Eighteenth street, Chicago.

Miscellaneous.

AMERICAN MEDICAL ASSOCIATION.

THE Twenty-sixth Annual Session will be held in the city of Louisville, Ky., on Tuesday, May 4th, 1875, at 11 A. M.

"The Delegates shall receive their appointment from permanently organized State Medical Societies, and such County and District Medical Societies as are recognized by representation in their respective State Societies, and from the Medical Department of the Army and Navy of the United States."

"Each State, County and District Medical Society entitled to representation shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half that number: *Provided*, however, that the number of delegates for any particular State, territory, county, city or town shall not exceed the ratio of one in ten of the resident physicians who may have signed the Code of Ethics of the Association."

"The Chairmen of the several sections shall prepare and read in the general sessions of the Association, papers on the advances and discoveries of the past year in the branches of science included in their respective sections. * * *"—*By-Laws, Art. II., Sec.* 4.

SECTIONS.

Practice of Medicine, Materia Medica, and Physiology: Dr. Austin Flint, Sr., New York, N. Y., *Chairman*; Dr. J. K. Bartlett, Milwaukee, Wis., *Secretary.*

Special Committees appointed to report to this Section:

On Meteorological Observations: Dr. J. M. Toner, D. C., *Chairman;* Dr. J. J. Woodward, U. S. A.; Dr. E. Lloyd Howard, Md.

On Clinical Observations: Dr. N. S. Davis, Ill., *Chairman;* Dr. H. A. Johnson, Ill.; Dr. J. B. Johnson, Mo.

Obstetrics and Diseases of Women and Children: Dr. W. H. Byford, Chicago, Ill., *Chairman;* Dr. S. C. Busey, Washington, D. C., *Secretary.*

Special Committees to prepare business for this Section:

Dr. M. A. Pallen, N. Y., *Chairman;* Dr. L. F. Warner, Mass.; Dr. J. K. Bartlett, Wis.

Committees appointed by the above:

On Unusual Fœtal Presentation: Dr. J. A. Octerloney, Ky.

On Retroversion of the Uterus in the first five months of Pregnancy: Dr. Heaton, Mich.

On the Connection of the Hepatic Circulation with Uterine Hyperæmias, Fluxions, Congestions, and Inflammations: Dr. L. F. Warner, Mass.

On the Relation of Menstruation during Lactation: Dr. S. C. Busey, D. C.

Surgery and Anatomy: Dr. E. M. Moore, Rochester, N. Y., *Chairman;* Dr. T. S. Latimer, Baltimore, Md., *Secretary.*

Committee to report to this Section:

On the Treatment of Fractures: Dr. Lewis Sayre, New York, *Chairman.*

Medical Jurisprudence, Chemistry, and Psychology: Dr. Jerome Cochran, Mobile, Ala., *Chairman;* Dr. G. A. Moses, St. Louis, Mo., *Secretary.*

State Medicine and Public Hygiene: Dr. H. I. Bowditch, Boston, Mass., *Chairman;* Dr. H. B. Baker, Lansing, Mich., *Secretary.*

Committees to report to this Section:

On Ventilation of Dwellings, School Houses, and other Public Buildings: Dr. R. C. Kedzie, Mich., *Chairman;* Dr. A. B. Stuart, Minn.; Dr. R. J. O'Sullivan, N. Y.

On Form of Bill to Establish a National Department of Public Health at Washington: Dr. H. B. Baker, Mich., *Chairman;* Dr. H. A. Johnson, Ill.; Dr. J. M. Toner, D. C.

On what Legislative Action, if any, can be taken to Enforce by Law an Examination of all Persons who enter upon the Practice of Medicine and Surgery, by a State Board of Medical Examiners: Dr. Foster Pratt, Mich., *Chairman;* Dr. S. G. Armor, N. Y.; Dr. D. W. Yandell, Ky.

☞ "Papers appropriate to the several sections, in order to secure consideration and action, must be sent to the Secretary of the appropriate section at least one month before the meeting which is to act upon them. It shall be the duty of the Secretary to whom such papers are sent, to examine them with care, and, with the advice of the Chairman of his section, to determine the time and order of their presentation, and give due notice of the same. * * *"—*By-Laws, Art. II., Sec.* 5.

The following Committees are expected to report:

On Cultivation of the Cinchona Tree: Dr. L. J. Deal, Penn., *Chairman.*

On some Diseases Peculiar to Colorado: Dr. John Elsner, Col., *Chairman.*

On American as compared with Foreign Winter Cures: Dr. H. R. Storer, Mass., *Chairman.*

On Railroad Injuries: Dr. W. F. Peck, Iowa, *Chairman.*

On Proper Legislation to Prevent the Spread of Syphilis: Dr. S. D. Gross, Pa., *Chairman.*

On the Use of Pessaries: Dr. John Morris, Md., *Chairman.*

On Cystic Degeneration of the Kidneys: Dr. John A. Octerloney, Ky., *Chairman.*

On the Diseases of Minnesota and the Northwest: Dr. D. W. Hand, Minn., *Chairman.*

On Prize Essays: Dr. John Davies Jackson, Ky., *Chairman.*

On Necrology: Dr. S. C. Chew, Md., *Chairman.*

On Rank of Medical Department of the Army: Dr. J. M. Toner, D. C., *Chairman.*

On International Medical Association: Dr. J. M. Toner, D. C., *Chairman.*

On Memorial on Dr. Henry Miller, deceased: Dr. S. D. Gross, Pa., *Chairman.*

On Memorial on Dr. George Mendenhall, deceased: Dr. J. A. Murphy, Ohio, *Chairman.*

The following amendments to the Plan of Organization are to be acted upon:

By Dr. H. B. Baker, Michigan:

"The officers of the several Sections shall be nominated by the Section in and for which said officers are to serve."

By Dr. Adams Jewett, Ohio:

"The Permanent Members shall consist of all those who have served in the capacity of delegates, and of such other members as shall have received the appointment by unanimous vote, and of all others who, being members in good standing of any State or local medical society entitled to representation in this body, shall, after being vouched for by at least three members, be elected to membership by a vote of three-fourths of the delegates in attendance, and shall continue such so long as they remain in good standing in the body of which they were members when elected to membership in this Association, and comply with the requirements of its By-Laws."

☞ Secretaries of all State Medical Societies that have adopted the Code of Ethics are respectfully requested to forward to the undersigned a complete list of the officers, with their post-office addresses, of those County and District Medical Societies entitled to representation in their respective bodies. This is the only guide for the Committee of Arrangements in determining as to the reception of delegates.

It will also enable the Permanent Secretary to present a correct report of the medical organizations in fellowship with the Association.

WM. B. ATKINSON, M.D.,
Permanent Secretary.
PHILADELPHIA, 1400 Pine St.

Book Reviews.

COMPENDIUM OF CHILDREN'S DISEASES, by Dr. Johann Steiner, Professor of the Diseases of Children in the University of Prague, etc. Translated from the second German edition, by Lawson Tait, F. C. R. S. New York: D. Appleton & Co. For sale by Jansen, McClurg & Co., Chicago. 400 pp.

The greater importance given to the study of the diseases of children in Germany, is largely due to the teachings of Henoch, Vogel, Steiner, and Korrmann. The first has enriched the literature of this subject by his excellent translations of West; the others by the compendiums which bear their names. A couple of years or so ago, the Appletons published Dr. Raphael's translation of Vogel's work, and now follow it by this reprint of an English translation of Steiner.

Prof. Steiner's position as physician for fifteen years to the immense Francis Joseph Hospital, has given him rare opportunities for the study of the diseases of infancy and childhood, the results of which he has embodied in this compact and systematic treatise of about four hundred pages. The work is divided into nine sections, which treat, respectively, of the investigation of children's diseases in general; the diseases of the nervous, respiratory, circulatory, and lymphatic systems; the diseases of the digestive, urinary and sexual organs; and diseases of nutrition; zymotic and cutaneous diseases; and lastly, a circular, giving rules for the management of infants, issued by the Birmingham Children's Hospital, with which Mr. Tait is connected. Each disease is taken up in its appropriate place; its nature, symptoms, course, anatomy, causes, diagnosis, prognosis and treatment, being systematically treated in turn. Especial care has been given to the subjects of diagnosis and pathological changes; but we find very little new in the way of treatment, which has been condensed into the smallest possible space, and seems to consist mainly of oxide of zinc, baths, stimulants, and raw beef soaked in wine.

Mr. Tait has given us an easy and faithful translation, whose only fault seems to be the preservation of such words as koprostasis, marantic, necrobrosis, helminthiasis, synostrosis, etc., where simple terms would have been better. His promised notes are also few and far between; but the book, as a whole, is a valuable one, especially as regards diagnosis and pathology, filling an intermediate place between the rather prolix work of Vogel, and the exceedingly condensed compendium of Korrmann.

H.